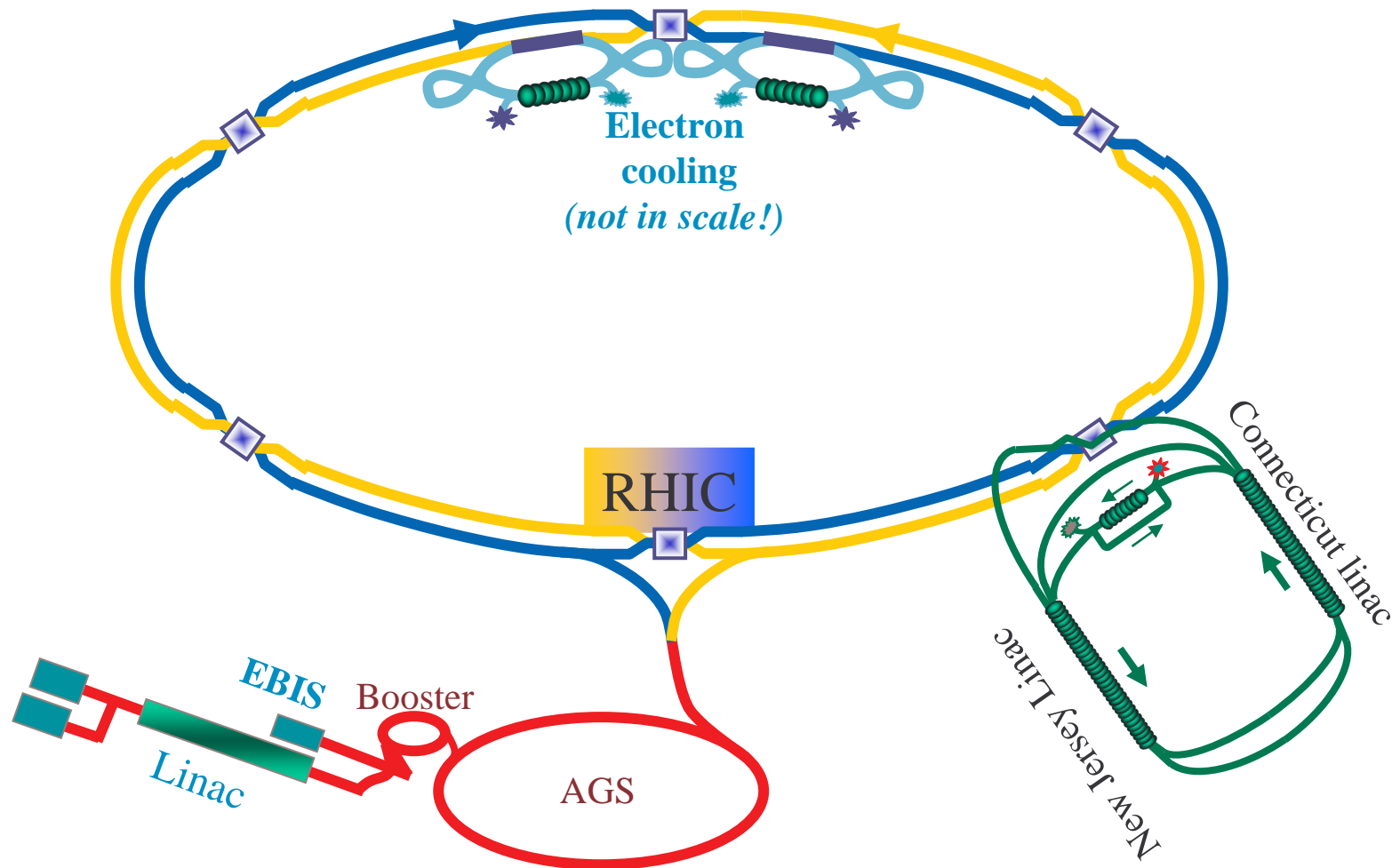


Linac-Ring Version of eRHIC

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ERL e-RHIC. IP at 4 o'clock version



ERL based eRHIC

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BROOKHAVEN
NATIONAL LABORATORY

- Wide range of collision energies (E_{cm} /nucleon from 15 GeV to 100 GeV. e energy as low as 2 GeV).
- High luminosity $\sim 2 \times 10^{33} \text{ cm}^{-2} \text{ s}^{-1}$ for protons, $\sim 2 \times 10^{31} \text{ cm}^{-2} \text{ s}^{-1}$ for gold independent of e energy.
- High degree of polarization ($>80\%$) of the electrons at any energy, no forbidden energies.
- One or two interaction regions with dedicated detectors
- e Energy simply upgradeable.
- Reduction of synchrotron radiation in detector by cooling ions.
- No quadrupoles in detector.
- Simple compensation for ion velocity.
- Possibility of γ -ion collider.

Main features

